

52. *Some Characteristics of Soboliphyme sp., a New Nematode from Martes zibellina sahalinensis Ognev.*

By Kyojiro SHIMAKURA.

Zoological Institute, Faculty of Agriculture, Hokkaido Imperial University,
Sapporo.

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Three mature individuals, two males and one female, of a nematode characterized by the possession of a large acetabular buccal capsule at its anterior end (Fig. 1) have recently been obtained from two female Saghalien sables, *Martes zibellina sahalinensis* Ognev, 1925, on whose stomach mucous membranes they were found attached. The nematode has proved itself to be closely related to *Soboliphyme baturini* Petrow, 1930, which was obtained from Kamchatka and Siberia and has been the sole representative of the family Soboliphymidae Petrow, 1930, corrected by Rauther, 1930. Evidences suggest that the nematode in question should probably be included in the genus *Soboliphyme* Petrow, 1930, and constitute a new species, the denomination and description of which will shortly be given elsewhere (Shimakura, K., and Odajima, K., 1934).

The new nematode possesses certain characteristics of systematic importance which are in all probability common to its nearest relative, but seem hitherto to have drawn little attention from nematologists. Some of these characteristics will be outlined in the following.

(1) The buccal capsule of the new nematode is provided with six small more or less cone-shaped papillae, dorsal, dorsolateral, and ventrolateral in position on each side, arranged in a circle surrounding the oral opening. The presence of such papillae in *Soboliphyme baturini* was not recorded in Petrow's original paper (1930), however, it must probably have been ascertained by Rauther (1930) who described the presence of "6, 12, or 18 papillae in one or two circles" as one of the characteristics of the family Soboliphymidae. But it is not clear how many circles of how many papillae are present surrounding the oral opening of *Soboliphyme baturini*.

(2) The circumoesophageal nerve ring is situated near the anterior end of the oesophagus. Immediately posterior to and in close contact with the nerve ring there are seven spheroid bodies, as observed superficially, of at least two distinct grades in size, arranged in a circle

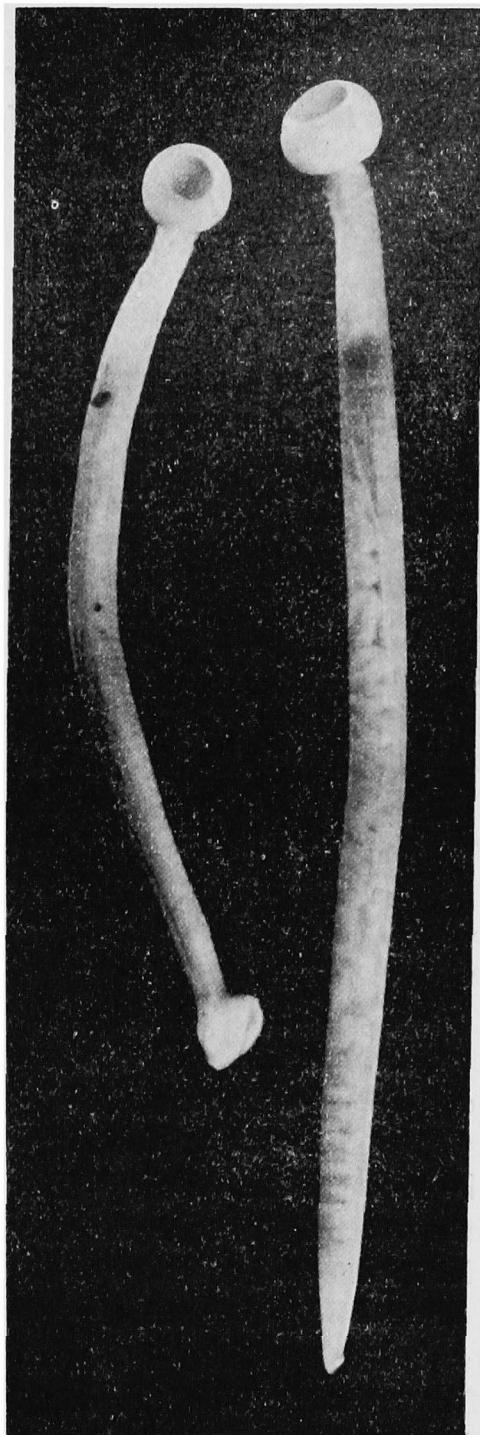


Fig. 1.

Soboliphyme sp., male (left) and female; preserved in 75 p.c. alcohol and photographed by reflected light; $\times 4$. The body of the male was fixed twisted around its longitudinal axis to an angle of about 80° , and that of the female about 100° .

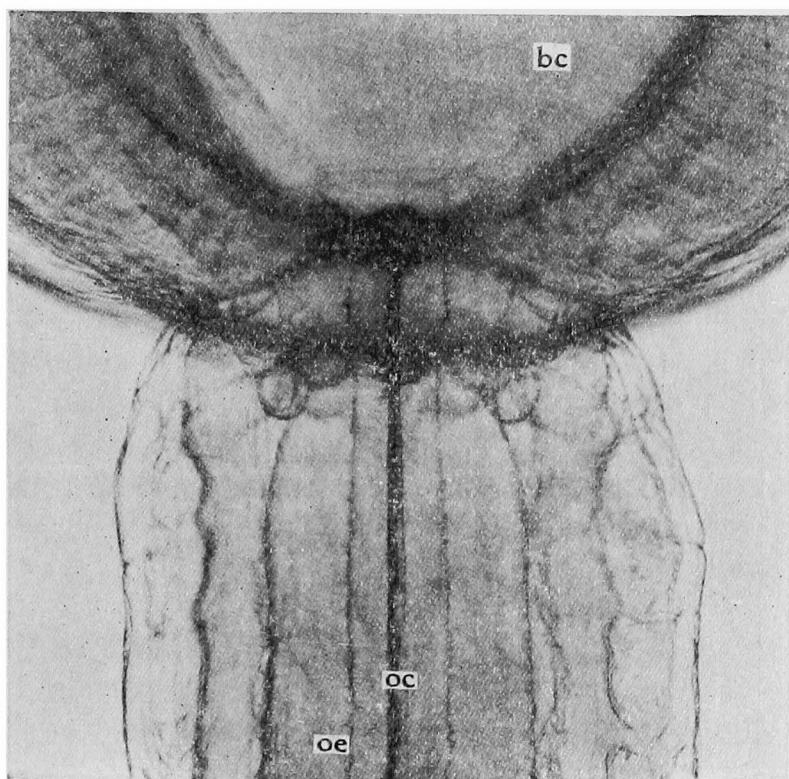


Fig. 2.

Cervical region of the female in slightly oblique dorsal view, showing seven spheroid-shaped cervical sacs; cleared in lactophenol and photographed by reflected light; $\times 45$; bc, buccal capsule; oc, triradiate oesophageal cavity; oe, oesophagus.

surrounding the oesophagus (Fig. 2). One is mediodorsal in position, two dorsolateral (one on each side), and other two ventrolateral, these five being more or less equal in size and relatively large. The remaining two, which are smaller, lie on both sides of the anterior end of the ventral longitudinal nerve trunk. The oesophagus is slightly constricted where it is surrounded by these spheroid bodies (Fig. 2) and the latter in turn are more or less flattened between the former and the body wall. Examined in sections, these spheroid bodies have proved to be sacs rather thick-walled and containing mucous or "plasma-like" substance. They are unknown in function, however, they may be temporarily referred to as "cervical sacs."¹

The "papillae," as described by Petrow (1930), surrounding the anterior end of the oesophagus of *Soboliphyme baturini* may probably

1) Whether or not these are comparable to the "cervical sacs" of Gnathostomidae (cf. Rauther, 1930, p. 270 (4)) is also a question at present.

be identified with the cervical sacs under consideration. Then their number, reported to be six (Petrow, 1930), makes a striking contrast with that in the new nematode.

(3) The male of the new nematode has a large, muscular, and modified bell-shaped copulatory bursa turned posteroventrad (Fig. 1), without rays. The bursal wall is dorsally more developed and its internal surface is provided with a pair of ridge-like lateral longitudinal thickenings. Similar conditions are also traceable in Petrow's (1930) Figs. 2 and 4 of *Soboliphyme baturini*, though nothing has been remarked by him about them: he simply states, „Das Schwanzende des Männchens ist mit einer glatten, glockenartigen Bursa versehen,“

The above stated characteristics of the copulatory bursa might possibly be regarded as one of the most important characteristics of the genus *Soboliphyme* Petrow, 1930.

Literature.

Ognev, S. I., 1925. A systematical review of the Russian sables. *Jour. Mamm.*, **6**, 276-280.

Petrow, A. M., 1930. Zur Charakteristik des Nematoden aus Kamtschatkaer Zobeln *Soboliphyme baturini* nov. gen. nov. sp. *Zool. Anz.*, **86**, 265-271.

Rauter, M., 1930. Vierte Klasse des Cladus Nemathelminthes Nematodes. Kükenthals *Handbuch der Zoologie*, **2**, 249 (4)-402 (4).

Shimakura, K. and Odajima, K., 1934. *Soboliphyme sahalinense* n. sp. (Nematodes) from *Martes zibellina sahalinensis* Ognev. *Trans. Sapporo Nat. Hist. Soc.*, **13**, No. 3 (in press).